









DREDGING OPERATIONS TECHNICA SUPPORT PROGRAM

TECHNICAL REPORT D-89-1

LONG-TERM MONITORING OF ELEVEN CORPS OF ENGINEERS HABITAT DEVELOPMENT FIELD SITES BUILT OF DREDGED MATERIAL, 1974-1987

Mary C. Landin, James W. Webb, Paul L. Knutson
Environmental Laboratory

DEPARTMENT OF THE ARMY
Waterways Experiment Station, Corps of Engineers
3909 Halls Ferry Road, Vicksburg, Mississippi 39180-6199



December 1989 Final Report

Approved For Public Release; Distribution Unlimited

Prepared for DEPARTMENT OF THE ARMY
US Army Corps of Engineers
Washington, DC 20314-1000

Destroy this report when no longer needed. Do not return it to the originator.

The findings in this report are not to be construed as an official Department of the Army position unless so designated by other authorized documents.

The contents of this report are not to be used for advertising, publication, or promotional purposes. Citation of trade names does not constitute an official endorsement or approval of the use of such commercial products.

The D-series of reports includes publications of the Environmental Effects of Dredging Programs:

Dredging Operations Technical Support
Long-Term Effects of Dredging Operations
Interagency Field Verification of Methodologies for Evaluating Dredged Material Disposal Alternatives
(Field Verification Program)

Unclassified SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE					Form Approved OMB No. 0704-0188
ta. REPORT SECURITY CLASSIFICATION Unclassified		1b. RESTRICTIVE MARKINGS			
2a. SECURITY CLASSIFICATION AUTHORITY		3. DISTRIBUTION/AVAILABILITY OF REPORT			
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE		Approved for public release; distribution unlimited.			
4. PERFORMING ORGANIZATION REPORT NUMBER(5)		5. MONITORING ORGANIZATION REPORT NUMBER(S)			
Technical Report D-89-1					
6a. NAME OF PERFORMING ORGANIZATION	6b. OFFICE SYMBOL (If applicable)	7a. NAME OF MONITORING ORGANIZATION			
USAEWES Environmental Laboratory	(5)				
6c. ADDRESS (City, State, and ZIP Code)		7b. ADDRESS (City, State, and ZIP Code)			
3909 Halls Ferry Road					
Vicksburg, MS 39180-6199					
8a. NAME OF FUNDING/SPONSORING ORGANIZATION	8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER			
US Army Corps of Engineers					
8c. ADDRESS (City, State, and ZIP Code) Washington, DC 20314-1000		10. SOURCE OF I	FUNDING NUMBERS	TASK	WORK UNIT
		ELEMENT NO.	NO.	NO.	ACCESSION NO.
11. TITLE (Include Security Classification)					
Long-Term Monitoring of Eleven Corps of Engineers Habitat Development Field Sites Built					
of Dredged Material, 1974-1987					
Landin, Mary C.; Webb, James W.; Knutson, Paul L.					
13a. TYPE OF REPORT 13b. TIME C	14. DATE OF REPORT (Year, Month, Day) 15. PAGE COUNT				
Final report FROM	то	December 1	1989		
16. SUPPLEMENTARY NOTATION Available from National Technical Information Service, 5285 Port Royal Road, Springfield,					
VA 22161. 17. COSATI CODES 18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)					y block number)
FIELD GROUP SUB-GROUP					
	See reverse.	ł			
19. ABSTRACT (Continue on reverse if necessary and identify by block number)					
Eleven habitat development field sites built by the US Army Corps of Engineers (CE) on dredged material were monitored from 1974-1987 in response to questions regarding their ecological contribution and longevity in comparison to natural habitats. Seven of these sites (Nott Island, Connecticut; Windmill Point, Virginia; Buttermilk Sound, Georgia; Apalachicola Bay, Florida; Bolivar Peninsula, Texas; Salt Pond #3, California; and Miller Sands Island, Oregon) were built during the CE Dredged Material Research Program. Four sites (Gaillard Island, Alabama; Lake of the Woods, Minnesota; Pointe Mouillee, Michigan; and Southwest Pass, Louisiana) were built by CE Districts and added to the long-term monitoring effort at the request of Mobile, St. Paul, Detroit, and New Orleans Districts. Each of the ll sites differed according to the type of habitat developed, location, dredged material substrate, structural development, water and energy regime, land-use (Continued) 20. DISTRIBUTION/AVAILABILITY OF ABSTRACT 21. ABSTRACT SECURITY CLASSIFICATION					
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT Trunclassified/unlimited Same as	Unclassified				
22a. NAME OF RESPONSIBLE INDIVIDUAL	RPT. DTIC USERS	22b. TELEPHONE	(include Area Code)	22c. OF	FICE SYMBOL

19. ABSTRACT (Continued).

one appears in the <u>Proceedings</u> of the Beach Technology '88 conference. Coastal Zone '89 was held under the auspices of the American Society of Civil Engineers, and Beach Technology '88 was held under the auspices of the Florida Shore and Beach Preservation Association. In support of the Coastal Zone '89 conference, the editor of this report organized a special session of five of the papers included here under the session theme, "Shoreline Change and Storm-Induced Beach Erosion Modeling," also used as the title of this report.

This information is expected to be of interest to US Army Corps of Engineers field offices and other public and private organizations involved with technical aspects of beach change modeling and the use of models in project planning and design.

Unclassified